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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,583	04/15/2004	Joachim Schmidt	2133.034USU	8182

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2139

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/825,583	Applicant(s) SCHMIDT, JOACHIM	
	Examiner Christian LaForgia	Art Unit 2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/10/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 June 2008 has been entered.
2. Claims 1-22 have been presented for examination.

Response to Arguments

3. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new grounds of rejection set forth below.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 10 July 2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the Examiner has considered the information disclosure statement.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2003/0053454 A1 to Katsavounidis et al., hereinafter Katsavounidis.

7. As per claim 1, Katsavounidis teaches a process for the packet-oriented transmission of data under application of at least one transmission system with a parallel and/or serial network and/or bus system with at least one user connected to it, the process, comprising:

transmitting the security-relevant data (paragraphs 0017, 0035, i.e. transmission of video information comprising user data identifier codes) and redundant information, respectively, based solely on all the data of a respective one packet (paragraphs 0016-0017, i.e. using forward error correction; one of ordinary skill in the art would recognize that forward error correction is a technique of error control for data transmission, whereby the sender adds redundant data to its messages);

wherein the security-relevant data is transmitted in at least one packet and each of the respective redundant information based solely on all the security-relevant data of the respective one packet is transmitted in a separate packet (paragraphs 0017, 0018, i.e. transmitting the forward error correction bits in a separate packet).

8. Regarding claim 2, Katsavounidis teaches that the redundant information is encoded (Figure 1B [block 106B], paragraphs 0037, 0040).

9. Regarding claim 3, Katsavounidis teaches that the redundant information is a check sum (CRC) calculated over the data (paragraphs 0016-0017, i.e. using forward error correction; one of ordinary skill in the art would recognize that forward error correction includes the use of a checksum).

10. Regarding claim 4, Katsavounidis teaches that the security-relevant data is selected from the group consisting of user data (paragraph 0017, user data identifier codes), check data, and control.

11. Regarding claim 5, Katsavounidis teaches transmitting several packets within a predefined (superset) frame structure (Abstract, paragraph 0017-19, i.e. plurality of frame packets).

12. With regards to claim 6, Katsavounidis teaches wherein the packets within a predefined (superset) frame structure include the security-relevant data and the redundant information that are allocated to each other (paragraph 0017-19).

13. Concerning claim 7, Katsavounidis teaches wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in a parallel or serial way (Figure 1A [element 120], paragraph 0037, i.e. communication networks can communicate both in parallel and serially).

14. Concerning claim 8, Katsavounidis teaches wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in strings or separately (paragraphs 0017, 0018, i.e. transmitting the forward error correction bits in a separate packet).

15. Regarding claim 9, Katsavounidis teaches wherein the packets include an addressing block and/or an identification code for their logical allocation (paragraph 0016, i.e. packet header information includes address information).

16. As per claims 10, Katsavounidis teaches a device for a transmission system with at least one parallel and/or serial network and/or bus system, for the packet-oriented transmission of security-relevant data comprising:

means, arranged on the side of the sender, for the packet-oriented embedding of the security-relevant data into at least one packet (paragraphs 0017, 0035, i.e. transmission of video information comprising user data identifier codes) and for the packet-oriented embedding of each allocated redundant information respectively based solely on all the security relevant data of a respective one packet into a separate packet (paragraphs 0017, 0018, i.e. transmitting the forward error correction bits in a separate packet).

17. Regarding claim 11, Katsavounidis teaches an encoding device for the encoding of the redundant information (Figure 1B [block 106B], paragraphs 0037, 0040).

18. Regarding claim 12, Katsavounidis teaches wherein the means for embedding are allocated means for the generation of the redundant information with the same number of bits (n) as the security-relevant data to be transmitted (paragraphs 0016-0017, i.e. using forward error correction).

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19. Regarding claim 13, Katsavounidis teaches wherein the means for the generation and/or embedding are designed such that any possible combination of the security-oriented data of a packet unambiguously results in exactly one of the possible combinations within the packet having the respective allocated redundant information (paragraphs 0017, 0018, i.e. forward error correction).

20. Regarding claim 14, Katsavounidis teaches means arranged on the side of the receiver for the verification of an error-free data transmission based solely on all the security-relevant data embedded in at least one packet and the allocated redundant information, wherein each redundant information based solely on all the security relevant data of a respective on packet is embedded in a separate packet (paragraphs 0020, 0021, 0037, 0038, i.e. decoding the received data).

21. With regards to claim 15, Katsavounidis teaches wherein the means for the verification are allocated means for reading out and allocating data and allocated redundant information received in different packets (paragraphs 0020, 0021, 0037, 0038).

22. Regarding claim 16, Katsavounidis teaches wherein several packets with the security-relevant data and/or the allocated redundant information are capable of being transmitted within a predefined (superset) frame structure (Abstract, paragraph 0017-19, i.e. plurality of frame packets).

23. Regarding claim 17, Katsavounidis teaches means for the packet-oriented embedding and readout of addressing blocks and/or identification codes for the logical allocation of individual packets and/or their contents to each other (paragraph 0016, i.e. packet header information includes address information).

24. Regarding claim 18, Katsavounidis teaches means are allocated to slave devices and/or a master device (paragraph 0038).

25. As per claim 19, Katsavounidis teaches a transmission system comprising:
at least one parallel and/or serial network and/or bus system (Figure 1A [element 120], paragraph 0037); and
at least one device according to claim 10 (see rejection of claim 10 above).

26. Regarding claim 20, Katsavounidis teaches wherein the network and/or bus system is at least one ring-, line-, star- and/or tree-shaped network and/or bus structure (Figure 1A [element 120], paragraph 0037).

27. Regarding claim 21, Katsavounidis teaches wherein the network and/or bus system is at least one selected from the group consisting of Interbus, one Ethernet, one Profibus, and one CAN (paragraph 0037).

Claim Rejections - 35 USC § 103

28. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

29. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsavounidis.

30. Regarding claim 22, Katsavounidis does not teach wherein the transmission system is configured for use in a field selected from the group consisting of building control technology, process industry, manufacturing industry, passenger transportation, and operation of an automation plant.

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the transmission system in one of the fields selected from building control technology, process industry, manufacturing industry, passenger transportation, and operation of an automation plant, since Katsavounidis states at paragraph 0016 that implementing the forward error correction disclosed would enhance error resiliency, especially when applied to important real-time data.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

33. The following patents are cited to further show the state of the art with respect to forward error correction, such as:

United States Patent No. 7,228,488 B1 to Grass et al., which is cited to show transmitting forward error correction packets separate from the corresponding data packets (see claims 9 and 17 for example).

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34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian LaForgia whose telephone number is (571)272-3792.

The examiner can normally be reached on Monday thru Thursday 7-5.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christian LaForgia/
Primary Examiner, Art Unit 2139

clf